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MILITARY TRAINING AND THE EXISTING SECONDARY-SCHOOL PROGRAM

Submitted by

Whitman Pearson
(B.S. in Econ., Univ. of Penna., 1929)

In partial fulfillment of requirements for
the degree of Master of Education

1948

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CHAPTER I

THE PROBLEM AND PUBLIC OPINION

The Problem

Objectives.-- The purpose of this thesis is two-fold: (1) to show to what extent the elements of military training (as now practiced in the army's basic training program) could be incorporated in the program of studies which now exists in grades ten, eleven, and twelve of average and better-than-average secondary schools; and, (2) to consider the effects on the objectives of the secondary schools of the country if these elements of military training were actually incorporated in their programs of studies at thegrade levels mentioned.

Method of the study.-- To achieve the purpose as stated, the writer proposes to proceed as follows: (1) Prepare a logically organized check list of the army's basic training program. This will be organized under two heads: (a) Objectives (b) Subjects or courses taught. Each subject or course will be analyzed into specific elements so as to reveal content.

(2) Prepare a logically organized check list of the elements of the program of studies in grades ten, eleven, and twelve of average and better-than-average secondary schools. This will be organized under two heads: (a) Objectives (b) Subjects or courses taught. Each subject or course will be analyzed into specific elements so as to reveal content.

(3) A point-for-point comparison will be made: (a) Between the two sets of objectives (b) Between the two sets of specific elements of content. In this comparison at every point, the writer proposes to set forth not only the possibility of incorporating a given objective or topic in the program of studies of grades ten, eleven, and twelve, but also the probable effect, desirable or undesirable, of such incorporation.

Limitations of the study.-- One of the major limitations of this study is the fact that only forty-one per cent of the white pupils of secondary-school age ever finish grade twelve and graduate, and less than half of the negro pupils reach the secondary school. The following figures are taken from the report of the President's Advisory Commission on universal training:[1]

---

[1] Report of the President's Advisory Commission on Universal Training, United States Government Printing Office, Washington, D.C., (May 29, 1947), p. 169.

Table I: Educational Training of White Selectees in World War II

Education	Per Cent
College	11
High-school graduates	30
High-school non-graduates	28
Grade-school and no schooling	31

"Of the negro selectees in the early years of World War II, 63 per cent from the north and 33 per cent from the south had attended high school, as compared with 14 percent and per cent, respectively, at the time of World War I."

A second limitation is obvious in the fact that the program of studies in grades ten, eleven, and twelve varies greatly from one part of the country to another. In any given region it varies greatly from rural to urban centers.

Sources of data.-- The objectives and elements of the army's basic training program will be taken from the War Department manuals furnished to the National Guard of the United States as a guide for the uniform training of citizen-soldiers.[1] Since the amount and type of basic training varies to some extent, depending on the arm or branch of service involved, eleven different programs will be analyzed and compared to show

---

[1] National Guard Training Program, Training Programs for Training Units of the National Guard of the United States, Washington, D.C., (August, 1946).

their common elements. The arms and branches studies will be the Infantry, Mechanized Cavalry, Engineers, Field Artillery, Medical Corps, Anti-Aircraft Artillery, Military Police, Armored Training, Quartermaster Corps, Signal Corps, and Ordnance. A composite program, representing the common elements and the average amount of time devoted to each, will be constructed as a basis of comparison with the elements of secondary-school training.

The objectives and elements of the program of studies actually in use in grades ten, eleven, and twelve, will be determined by a documented analysis of the following objective studies:

> Loomis, A. K., Edwin S. Lide, B. Lamar Johnson, The Program of Studies, Bulletin, 1932, no. 17, National Survey of Secondary Education, Monograph no.19, Washington, D.C., United States Office of Education.
>
> Koos, Leonard V. and Staff, Summary, Bulletin, 1932, no. 17, National Survey of Secondary Education, Monograph no. 1, Washington, D.C., United States Office of Education.
>
> Ferriss, Emery N., W.H. Gaumnitz, P. Roy Brammell, The Smaller Secondary Schools, Bulletin, 1932, no. 17, National Survey of Secondary Education, Monograph no. 6, Washington, D.C., United States Office of Education.

The report of the President's Advisory Commission,[1] represents the carefully studied conclusions and recommendations of a group of nationally-known, non-mili-

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[1] President's Advisory Commission, Op. cit., p. 169

tary leaders commissioned to make an objective study of the military training problem. The pertinent results of this study constitute an important part of the "Public Opinion" section of this chapter.

Public Opinion for Integration with the Secondary-School Program

Attitude toward peacetime military training.--No large proportion of our young men have ever received army training before our various declarations of war, because our small regular army, national guard, and reserve officer training units have been on a voluntary basis, and the traditional American attitude has been to abhor the life of a soldier. A few private schools like Culver, St. John's, and Wentworth have offered a military and secondary education at the same time, to the great advantage of their graduates in our army, and a few public high schools such as Lowell and Gloucester, Massachusetts, have a military drill as a supplement of their physical-education training programs, but only a small percentage of the male population has been exposed to this sort of training.

Since the idea of combining military and secondary-school training on a compulsory basis is so new and perhaps radical, the pertinent thought on the

subject must necessarily come from current literature especially magazines and newspapers.

Military training in the secondary-school curriculum.-- Professors W. W. Carpenter and A. G. Capps of the University of Missouri, writing in School and Society present an argument in favor of combining military training and secondary-school education.1/

> Without doubt, one of the questions that will have to be considered is whether or not military training should be added to the curriculum of the secondary schools.
>
> The upper secondary school covering grades eleven through fourteen, and ages sixteen through twenty, may well be used for a modified form of military training. The organization may be similar to our present ROTC units, but its major purpose may not be that of officer training.
>
> It should be the aim of the public schools through the services discussed above to bring as much as possible of the boy-power up to the physical standards of the armed forces.
>
> There is every reason to believe that girls may be considered in the universal-service act. If this is done, the public schools should cooperate with the medical schools and hospitals in the preparation of nurse's aids, and of skilled technicians who will be available for the hospitals at home as well as those for the armed forces. Never again should there be a shortage of nurses and technicians, either for civilian service, or for service with the armed forces.

In this article Professors Carpenter and Capps quote from the doctoral dissertation of A. O. Pittenger.

> Every individual should be trained, guided,

1/ W. E. Carpenter and A. G. Capps, "The Function of Public Education in Universal Military Service," School and Society, (March 17, 1945) 61:1577.

> and equipped to fill a dual role as a citizen-soldier, a man or woman trained, equipped, and doing useful work in peace, and trained, equipped and ready to do an equally essential and closely related task in wartime.
>
> Every portion of this program which the school can perform, even with sweeping modifications of the school, should be done by it. Those portions schools are unable to do are to be delegated to the army. The two programs should coordinate, but the army training should in no way encroach upon the educational functions. The army should be another agency with shich education conducts cooperative training, just as some schools do now with industry in the diversified occupations programs.[1]

Giving an affirmative answer to the question, "Should We Have Compulsory Military Training?", Dean William F. Russell of Teacher's College, Columbia University was quoted by School Management as follows:[2]

> We shall no longer have a breathing spell in order to get ready .... If military training should prove to be unnecessary, we can easily abolish it.
>
> They (the army and navy) must convince the American fathers and mothers that the length of time required is truly necessary, that there be no organized vice and crime near ports and army installations, that there be proper provision for health and welfare, and that there be an adequate educational program.

Nature of total defense program.-- Arthur B. Moehlman brings out factors which are often overlooked by our

---

[1] A. O. Pittenger, The Growth of an Educational Philosophy Supporting a Broad Form of Military Training in Democratic Schools, (Unpublished Doctoral Dissertation, University of Missouri, 1943, p. 311-312).

[2] Russell, William F., "Should We Have Compulsory Post-war Military Training?", School Management (October,1945) p.70.

military leaders, when he writes:[1]

> Universal military training of youth is only one phase, and no longer even the most important phase of a total defense program. Stripped of professional slogans, most of the essentials of good defense preparation; sound health, physical vigor, neural stability, adequate education, flexibility, civic competence, self-discipline, and self-control can and should be taught within our communities and states in existing and improved public schools.
>
> The only phase of a national defense program not covered by the school is that which includes scientific research, development of industrial potential, and military drill; basic military skills can be taught in less than twelve weeks. Moreover, the rapidity of change constantly growing out of technical improvements and new discoveries makes it impossible to give adequate instruction concerning future military techniques.

Military value of high school physical training.--Superintendent of Schools Lyons critizes the way we implemented our post World War I physical-training programs, born of military shortcomings, but gives an argument in favor of high-school physical education as a military asset.[2]

"In the years following World War I most of our present high school gymnasiums were built, and our physical education programs were extensively developed. In spite of these changes, rejections in the draft are nearly as high (over 30 per cent) during the present

---

[1] Moehlman, Arthur B. "Our National Defense", The Nation's Schools, (December, 1945) p. 19, 36:6.

[2] Lyons, Gilbert, "Cause for Army Physical Rejections Sought", School Executive (January, 1945) 64:39.

war, as they were in the last."

Mr. Lyons investigated the causes of rejections in six high-school graduating classes from 1939 to 1944, and these were some of his conclusions:

> Students who have taken advantage of their educational opportunities to the fullest extent and graduated from high school, are most likely to meet the physical requirements of selective service, as evidenced by the fact that 9% of these boys were rejected as against a general rate of more than 30%. The implication is that the percentage of rejections is lower because these high school graduated had advantages which others who did not go as far in school failed to enjoy. The type of critical defects (causes of rejection) would indicate that the need for follow-up and complete attention to individual defects was of equal importance with general group treatment for all pupils."

In The Clearing House for March, 1946, Dr. Leslie Irwin also finds fault with our physical training programs:[1]

> Of the 22,000,000 men of military age, eight or nine million, or approximately 40%, were found unfit for military duty.
>
> A high majority of the youth examined for military service either did not participate in school programs of health and ;hysical education, or the programs the comparatively few did participate in, were unacceptable from the point of view of established standards set for time, facilities, equipment, and leadership personnel. If there was a failure then it can be attributed more to a complete lack of health education and physical education programs designed to reach all of the students in the schools.

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[1] Irwin, Dr. Leslie W. "Were We a Nation of Weaklings," The Clearing House (March, 1946) p. 392-393, 20:7.

What is military training?-- Carl A. Jessen expresses a view of what should constitute military training when he writes:[1/]

"The courses proposed, are not a substitute for military training; they are military training in as real a sense as is military training."

His report "The Best Kind of Training (High School) For Military Service" stressed the importance of competent, well disciplined men, of good health, and physical fitness, of "fundamental information and patriotic motives for fighting men gained through basic subjects such as mathematics, science, English and social studies, and of specialized knowledge and vocational skill useful in the armed forces".

Grade level of military training.-- Walter C. Eells has presented some objective data as to the grade level at which military training should be presented.[2/]

> Replies to an inquiry were received from Junior College leaders in 37 states. Boards of trustees, faculty members, and students were represented as well as presidents and deans.
>
> Fifty-seven per cent of the replies favored universal military training, while 43 per cent

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[1/] Jessen, Carl A., "The Best Kind of High School Training for Military Service", Education for Victory (April 15, 1942) p.31.

[2/] Eells, Walter, "Universal Military Training Favored by Junior College Leaders", Education for Victory, (July 20, 1944) p. 18-19.

were opposed to it. Of those who favored it, 40 percent thought it should begin at a designated age year, the largest number favoring the 18 year date; 60 per cent preferred a flexible period of four or five years, the largest number favoring some year between the young man's 17th and 22nd birthdays."

Attitude of Commissioner Studebaker.-- Although he didn't specifically mention military training, Commissioner Studebaker lists three objectives for high-school education, some or all of which might be attained by combining military with the secondary-school program.[1/]

Qualitative changes in the high schools should accomplish three ogjectives:

1. Maintenance and improvement of the physical and mental health of students.
2. Improvement of basic understandings, skills, and attitudes in the fields of language, mathematics, science, and the fine and practical arts.
3. Strengthening of the civic and ethical elements of the educational program.

Commissioner Studebaker recommended that, in the light of the shocking figures revealed by selective service officials of the three million youths physically unfit for military duty, greater stress be placed on health instruction, the building of gymnasiums, play ground construction, and an annual med-

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[1/] Studebaker, John W. "Studebaker Recommends High School Changes", The School Executive (October, 1946) 66:2, p.49.

ical examination with a follow-up to acquaint parents with the results of the examination.

Should we discard our wartime courses?-- George McCahey writes:[1]

> Under wartime pressure we instituted two pre-induction courses: Aeronautics and Seamanship. Both boys and girls enrolled. Pupils finishing these courses were surprised at the amount of biology, geography, physics, mathematics, chemistry, and electricity they had learned. These wartime courses have made themselves felt in the educational program of our school.

American Legion attitude.-- Under the title, "A Peace-time Training Proposal From the American Legion", William C. Bagley mentions a scheme proposed by the Cincinnati Legion Post which would require a total of 52 weeks of compulsory service, and would give as much as two-thirds of the time to "specialized education or vocational training under military supervision in high schools, colleges, regular military units, National Guard, Reserve Officer's Training Corps, Officer's Reserve Corps, or Enlisted Reserve Corps".[2]

The American Legion has collected quotations of prominent people on the subject of military training,

---

1/ McCahey, George F. "Should We Discard Our Wartime Courses?", The Clearing House (March, 1946) 20:7, p.396.

2/ Bagley, William C., "APeacetime Training Proposal From The American Legion", School and Society (July 14, 1945) 62:1594, p.20.

and presented some of them in the organization's official publication, "The National Legionnaire".[1]

"Ours is one of the land-college group. We feel that military training is a very fine thing and we are greatly interested in seeing it continued."--Dr. G. D. Humphrey, President, Mississippi State College.

"One year of intelligent discipline would be a valuable gift for a young person."--Lucy J. Dickinson, President of Women's Clubs.

"The United States has scrapped its military strength so fast it no longer is capable of defending its citizens against a sneak attack."--Admiral R. Kelly Turner, United States Naval Representative on United Nations Staff Commission.

"There is no possibility of preparedness breeding militarism in America. Certain constant factors in our political, social, and industrial structure make either the creation or the support of militarism impossible."--William Howard Taft, Former President of the United States.

"It is my belief a second universal military training law should be passed just as soon as possible."--Dr. Gibb Gilchrist, President Texas A. and M. College.

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[1] "Universal Military Training", The National Legionnaire, (May, 1947) 13:5.

"If adopted now, a strong plan for universal military training will enable the United Atates to speak with great authority at the peace table."--Dr. Blake R. Van Leer, President Georgia College of Technocracy.

"I am in favor of compulsory military training in the colleges themselves and I'd favor immediate enactment of adequate legislation. Those who do not go to college should receive the straight year of military training."--Dr. James O. Hoskins, President of University of Tennessee.

Integration of military and secondary training.--One of the strongest statements favoring integration of military training with secondary education has been made by Deanne W. Malott, Chancellor of the University of Kansas:[1/]

> Basic training, however, never extended over more than a few weeks. What then will be done in the proposed 12-month period. Will basic training be stretched out for some three times its wartime length? If to this training should be added (as seems to be likely) work in vocational education, the taxpayer would be asked to duplicate in part the already complex public education system of this country. Such a duplication would seem to be neither necessary nor desirable.
>
> Rather than superimpose on a purely military program studies and tehniques commonly found in civilian life, where they can be integrated with continuing work, it would seem wise to utilize the curricula of existing educational institutions and add to them any needed work in military

---

[1/] Malott, Deanne W., "Universal Military Training", School and Society (March 2, 1946) 63:1627.

training, thus effecting a saving not only in money but in time.

In an article opposing universal military training G. Robert Koopman and Leon S. Waskin of the Michigan Department of Public Instruction, presumably without intention, advance an argument for presenting whatever military-training program might be adopted through the regular school facilities:[1]

> Furthermore, even the development of many technical skills useful for military purposes can be done more adequately in our schools and colleges than in military camps. If,,on the other hand, universal military training is to be largely "basic" training, no one yet has defined adequately what such basic training for atomic warfare should be.

In the same manner Chancellor Tolley of Syracuse University, while attacking the general idea of universal military training, gave an argument for an integration with regular education, if we must have some form of compulsory military service.[2]

> It is inexcusable, however, to interrupt education again for the oncoming youth of our land in a time of acute shortages in the higher technical and professional fields.
>
> Education has an important place in any program of national well-being and military security. Certainly we do not need more time for training in peace time than is required in time of war.

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[1] Koopman, G. Robert and Leon S. Waskin, "The Case Against Universal Military Training", The Nation's Schools (June, 1947) 39:6.

[2] Tolley, William P. "Should We Have Compulsory Military Training?", School Management (October, 1945) p.70-1.

> The basic training of men interested in aviation can be given in connection with an Air Corps ROTC program in schools and colleges and that is where it should be given.

Public Opinion Against Integration with the Secondary School Program

Educational limitations of military training system.-- Dean Henzlik of the University of Nebraska attacks universal military training on two important points:[1]

> A careful consideration of actual records in war or peacetime gives little or no basis for contending that its by-products constitute a good education for citizenship. The most fruitful time to promote and develop health is in the years before military age. Furthermore, the system of compulsory military training rejects those who need health services most.
>
> Next, the kind of discipline the Army gives is good for accomplishing the ends of war, but does not completely train an individual to make intelligent choices and decisions in every day civilian life or produce self-control and self-direction. The army is not the place to educate for democracy.

Education for war is indoctrination.-- The National Council Against Conscription condemns universal military training in these words:[2] "Military training and sound education are incompatible."

The organization's "Conscription News" criticizes the idea of military training for 18 year olds, find-

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[1] Henzlik, F. E. "A Dean Looks at Compulsory Military Training", The School Executive, (May, 1945) 64:9.

[2] National Council Against Conscription, Conscription News, Washington, D.C., (January 23, 1947).

ing particular fault with an alleged War Department quotation, "Opportunity will be provided for the raising of the standards of education for the nation's youn manhood". The publication contends that education as a preparation for waging war is more properly called indoctrination and that military training develops the herd instinct and discipline of the wrong kind. Military training in the schools, it is stated, threatens academic freedom. Evidence is cited to show that in one institution a group of advanced ROTC students had a higher average in the expression of militaristic opinion than any other group studied.

Parent-Teacher Association attitude.-- The National Council of Parents and Teachers goes on record with the following "Statement of National Defense", adopted by the Board of Managers of the National Congress of Parents and Teachers, June 5, 1947.[1]

> We believe that in this period of international tension, as we work diligently for permanent peace, our nation should maintain a military force capable of going into action in defense of the nation or in fulfillment of our international commitments. We urge a broad program ofscientific development and technological application, a coordinated intelligence service, a strong up-to-the minute air force, a strong navy, and an adequate army composed of

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[1] Bulletin, Massachusetts Parent-Teacher Association, Incorporated, (June, 1947) p. 1, 18:10.

> thoroughly trained, fully equipped men. We urge these rather than a universal military training, which at best could do no more than produce an unmobilized mass of half-trained boys. We consider a program of universal military training to be unjustifiable for purely educational purposes, an obstacle to world understanding and world peace, and an inadequate provision for defending the nation under conditions of modern warfare.

Report of the President's Advisory Commission on Universal Training[1]

The Commission.-- In June 1947 the report was made available by the United States Government Printing Office, and it contains a wealth of objective data on the subject of this thesis. Of especial significance is the fact that the Commission, headed by President Compton of the Massachusetts Institute of Technology and including Joseph E. Davies, Harold W. Dodds, Truman K. Gibson, Jr., Daniel A. Poling, Anna M. Rosenberg, Samuel I. Rosenman, Edmund A. Walsh, and Charles E. Wilson was unanimous in its findings and recommendations. Its members started with a considerable disparity of viewpoint but agreed unanimously in their judgment of the situation after six months of intensive study.

Universal military training recommended.-- On the subject of universal military training in general the

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[1] Report of the President's Advisory Commission on Universal Training, United States Government Printing Office, Washington, D. C., (May 29, 1947) p.29.

Commission reports as follows: "That is why, as the sixth element in our security program, we definitely recommend a program of universal training for all young men in our Nation."

Objectives of universal military training program.-- In the opinion of the Commission, the essential objectives of such a program should be these:

> Military necessity must be its principal emphasis and concern ....There should be integrated into the program, and without sacrificing essential military objectives, the maximum advantages in terms of health, education, character development, and training for citizenship ....The program should reduce to a minimum, consistent with its military objectives, the disadvantages and dangers inherent in the operation of any program of this character .... Consistent with the attainment of other objectives, the program should be one which can be operated at a minimum of cost to the Federal Government, the economy at large, civilian institutions which may be affected, and the individuals undergoing training .... The program must be so designed that it is properly within the powers of the Federal Government to legislate it.

Training for girls.-- The Commission was interested only in the study of universal military training for men, but it did record an opinion about the place of women in our national security program:

"We urge that consideration of the advisability of establishing a program for women in all possible fields of wartime importance, be a function of the commission set up to administer the universal training program for young men."

Age and length of training:-- Eighteen was the age designated for the beginning of compulsory training, with the provision that it could be started at 17 by t those who volunteered. The length of the basic training period was a difficult problem, and the Commission came to this conclusion:

> Suggestions as to the necessary minimum length of this basic training period varied between four and twelve months. We have concluded that under all circumstances this basic training should extend for a period of six months, should take place entirely in camps or similar special training centers, and should be of the same duration for all persons. Training for a shorter period would not meet the minimum military objectives of the program and would not be worth its cost. It would not be at all practical or desirable to transfer any of this training to secondary institutions.

Integration with secondary school program.-- On the specific proposition of using the secondary schools for the military training program, the Commission had a very definite opinion:

> We do not believe that any portion of the program could be successfully undertaken by the secondary schools. It is true that courses of first aid, map reading, physical training, fire fighting, hygiene, sanitation, etc. which are proposed for the basic training curriculum, might well be taught as part of secondary school education. It is, however, the continuous six months night and day experience in military training in camps with other men, and under strict discipline, which is essential, and which could not be supplied by the same courses in high schools. There are other more obvious and, in some cases, insuperable objections to relegating any portion of this training to our schools:

> The failure of many boys to complete secondary school; the great unevenness in quality among the secondary schools themselves; the large obstacles in the way of obtaining relatively standard courses of equivalent quality in thousands of different institutions; the problems which would be created by the possible failure or inability of some institutions to provide the necessary training; and the dislocations which might be caused in the secondary school curriculum itself.

The Commission quoted Bureau of Census statistics to show that of World War selectees (white) 31 per cent wete in the "grade school or no schooling" category, while the median number of years of schooling for all selectees in the age group 18 to 44 for 1940 was 9.4 years or the equivalent of a little more than a year of high school.

> In March 1940, of some 20.6 million children in the ages 7-15 inclusive, considerably more than a million were not attending school of any kind. Among the 6-year olds and 16 and 17-year olds, about 30 per cent were not in school. Of all children in the ages 6-17 inclusive, more than 2,000,000 were not enrolled in regular schools.

Pre-service training in other countries.-- The Commission brought out this important data: At least 22 foreign nations have requirements for military training of youths of pre-service age. In 18 of these countries, military training is compulsory for students in primary or secondary schools. An additional four countries require that military training be given to youths whether or not they are in school.

The 18 countries which include compulsory military training as part of their school curriculum are: Argentina, Bolivia, Brazil, China, Colombia, Denmark, Ecuador, Egypt, El Salvador, Guatemala, Mexico, Norway, Peru, Poland, Sweden, Switzerland, Turkey, and Russia. In most of these countries the training is the joint responsibility of the departments of defense and education.

Pre-service training starts as early as six years of age in Switzerland and in primary schools in several other countries. The early training usually includes only physical training and later may merge into subjects more closely related to the military. In addition to drill and other military and physical education, some widely diversified courses may be included. Such courses include social studies (Canada), skiing (compulsory in Switzerland and offered as an inducement to proficient trainees in France), and morale building (France). A physical training battalion in the Union of South Africa assists boys from 15 years upward who suffer from remediable physical defects. The programs of the physical training battalion includes remedial and recreational training, education, military training, and character building. Swiss public schools give a special course for recruits

who have been pronounced fit for military service but who failed mental and gymnastic tests when they registered at 19.

Switzerland.-- The Commission points out that Switzerland was the first nation in modern times to introduce compulsory military service, and that for centuries it has been the best-armed democracy in the world. Great emphasis is placed on physical condition and an effort is made in the schools to develop vigorous and alert youths ready for the compulsory military training.

> Gymnasium drill without weapons, but in accordance with army regulations, is a compulsory subject for all boys during the entire obligatory school period from 5 to 15 (or 6 to 16) years of age. Schools are required to reserve three hours per week for gymnastics and additional time must be devoted to hikes, games, terrain reconnaissance exercises, and winter to to skiing.
>
> Though compulsory military training is not closely integrated with the educational system nor with public health measures, the high standard set for recruits, the periodic outdoor military experience, and the corrective methods prescribed for those not totally fit, mentally or physically, have proved undoubted factors in eliminating illiteracy among men of military age and of improving the general level of health and hygiene.
>
> Approximately one out of every seven of Switzerland's population can be mobilized within 48 to 72 hours. That country can thus mobilize more men ready to fight in proportion to its population and in shorter time than any other country in the world.

Union of South Africa.-- The Union of South Africa is the only one of the British Commonwealth of Nations

in which compulsory military training is traditional, and the Commission made a study of its preservice training program.

> In areas where facilities for proper traincan be arranged, South African boys between the ages of 13 and 17 are required to become cadets unless their parents register a written objection. Units of the Cadet Corps exist in most schools, and are attached to local Active Citizen Force units. Instructors in the Cadet Corps may be cadet officers among the schoolmasters or student officers among the boys, or sometimes warrent officers or noncommissioned officers of the Instructional Corps. Cadet training consists of drill, miniature-rifle shooting, and physical training. If facilities are available, more technical subjects may also be included. Usually cadets train only one hour a week, and continuous training periods during the year are somewhat exceptional. In most cases, cadet training is during a boy's free time, although in some of the larger school pre-service training may be included asa regular part of the curriculum. After a cadet has served efficiently for three years he receives a certificate which dinimishes the amount of training otherwise required in the Citizen Force.

Sweden.-- Sweden fought its last battle in 1812, and the Commission credits the country's compulsory military training system with being a major factor in its more than a century of peace.

The Report names two features of this system which are allied with the school program:

> Required gymnastics for boys amounting to about five hours per week are given in high schools and about one week of military instruction. This latter is largely devoted to shooting.
>
> Outdoor sports and athletics, including cross-country running and track work, are especially popular among Swedish youth. This, too, is voluntary, but constitutes, nevertheless an important

preparation for military training.

Soviet Russia.-- Since Soviet Russia is the only power which constitutes a serious threat to American security at the present time, it is of primary importance to know what this potential enemy is doing in the field of military training. So the Commission has reported the elements of Russia's secondary-school military training plan in considerable detail.

> According to the resolution of the Council of Ministers of August 13, 1946, preservice training is carried out at present according to the old (1941) 110-hour curriculum only through the eighth ninth, and tenth years of secondary-school. The primary training established before for boys in the fifth through the seventh years of secondary school is confined to physical training and is not directly military training.
>
> Although in general the pre-service training is as before combined with the regular school curriculum, the trainees are assembled from time to time in camps for a period of from 5 to 10 days to undergo training under conditions identical with those of a regular army unit.

Specific Program.-- The following program appeared on February 14, 1947 in the official periodical of the Chief Administration of the Universal Military Training over the signature of Colonel Stebaev, the chief of the program divison:

> The curriculum of pre-service training, military and physical, of the students of the eighth to tenth years covers the minimum basic knowledge required of a soldier. In the eighth class the student shall get acquainted with the organization of the armed forces of the USSR, with the rudiments of military discipline and the rules for

> the conduct of service men. They shall study the action of soldiers in formation without arms, the mechanism of the carbine, the methods and rules for firing it. In the ninth class, in addition to the theoretical knowledge, the students acquire the practical training of the rifleman. Whenever the pre-draftees are assembled for training in camps (from 5 to 10 days) they get practical training in the field under conditions which are very close to those of army service. In the tenth class, by means of review, the theoretical knowledge acquired in the eighth and ninth classes is improved and the practical training is perfected. Besides, the mechanism of the submachine gun and the rules for firing it are studied and the student is given the fundamentals of military topography. Physical training in the eighth to tenth classes is an inseparable part of the military training of the student and is directed toward the development of physical qualities required of a soldier. By the character of the exercises the physical training is a continuation of the physical education which began with the first years of school.

This program consists of several more paragraphs which in brief, have to do with the value of demonstration, the use of actual examples of Soviet military exploits, the use of well-qualified students as assistant instructors, the necessity for remedial classes, lesson plans, a rating system, differentiated assignments, and integration. There is adequate evidence to show that the Russians have applied most of the principles common to modern secondary education to the implementation of their pre-service military training program.

The Commission's Summary.-- In its summary of findings and recommedations, the Commission states:

> After nearly six months of the most intensive study, the members of this Commission have arrived at the unanimous conclusion that universal training is an essential to safe-guard the United States and to enable us to fulfill our responsibilities to the cause of world peace and the success of the United Nations.
>
> On the basis of all these considerations, we recommend that it be made the obligation of every young man upon reaching the age of 18, or upon completing or leaving high school, whichever is later, to undergo a period of training that would fit him for service to the Nation in any future emergency. This period would generally be divided into two parts. The second would include a number of alternative programs or options, one of which would have to be chosen on completion of the basic training.

The preceding digest of public opinion on the question of integrating military training and the secondary school curriculum leads the author to the following conclusions:

1. The public schools should do as much as possible to bring the nation's youth up to the physical standards required by the armed forces.

2. A coordinated military training and school program is desirable as the two programs have many similar aims.

3. Education is an essential in any scheme of national security.

4. According to the President's Commission, military training is necessary, it should involve at least six months away from home, and it would not be practical to transfer this training to the secondary schools.

However, some courses such as first aid, map reading, physical training, fire fighting, hygiene, and sanitation, might be part of the secondary-school curriculum.

5. Military training is compulsory in 18 countries, has been apparently successful in the democracies of Sweden and Switzerland, and is an important element of the educational system of our greatest potential enemy in Russia.

6. Opponents of military training claim that the Army is not the place to educate for democracy, and that such training is indoctrination.

CHAPTER II

THE ARMY'S BASIC TRAINING PROGRAM

War Department Training Program for National Guard

Basic training program.-- The War Department has prescribed for the National Grard the "courses of study" which are designed to make a soldier out of an ordinary citizen in from 166 to 221 hours, depending on the arm or branch of service involved. This program will be presented in detail to show the elements which are common to all of them and which can be considered as "required elements" of a basic training program.

> War Department training program-AUTHORIZATION* This training program is issued in compliance with War Department letter (WD GCT 353, 13 March, 1946, 29 March, 1946) subject, "National Guard Training Directive.[1]
>
> PURPOSE - The purpose of this program is to furnish a guide for the uniform training of infantry units of the National Guard during the Interim Plan, the first two training years following the organization of a unit.
>
> SCOPE - The program is outlined to provide:
>
> a. Initially, individual training in basic subjects and progressive training in technical subjects and individual tactical training.
>
> b. Tactics and techniques of small units to include the company in the first year, and a review in the second year.

Programs of instruction.-- The programs of instruction follow:

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[1] National Guard Training Program, Infantry Training Program for Training Infantry Units of the National Guard of the United States, Washington, D.C.(August,1946)

Table 2: War Department Training Programs for Training Infantry, Mechanized Cavalry, Engineers, Field Artillery, Medical Corps, and Anti-Aircraft Units of the National Guard of the United States.[a]

Subject	Number of Hours					
	Infantry	Mechanized Cavalry	English	Field Artillery	Medical Corps	Anti-Aircraft Artillery
(1)	(2)	(3)	(4)	(5)	(6)	(7)
AGF Proficiency Tests........	22	22	22	22	22	22
Bayonet...........	4	4	4	4		4
Chemical Warfare..	6	4	4	4	4	4
Commander's Time..	19	19	19	19	19	19
Compass...........	4	4	4	4	4	4
Defense...........	4	4	8	4	4	2
Drill and Ceremonies.............	25	25	25	25	25	25
Martial Law.......	6	6	6	6	6	6
Equipment Care....	1	1	13	13	1	1
Grenades..........	4	4				
Inspections.......	12	12	14	14	12	12
Interior Guard....	7	5	5	6	5	5
Communications....	2		2	2	2	4
Intelligence......	4		2		2	4
Map Reading.......	10	10	10	10	10	10
Marches and Bivouacs.............	16	16	16	16	16	16
Military Courtesy.	4	4	4	4	4	4
First Aid.........	6	6	6	6	6	6
Mines and Booby Traps...........	4	4	13	4	4	4
Army Organization.	1	1	1	1	1	1
Athletics and Physical Training...	8	8	8	8	8	8

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a/ National Guard Training Program, Training Program for Training (Infantry NGTP 7-1, Mechanized Cavalry NGTP 2-1, Engineers NGTP 51, Field Artillery NGTP 6-1, Medical Corps NGTP 8-1, Anti-Aircraft Artillery NGTP 44-1) Units of National Guard of the United States, HQ AGF Washington, D.C. (August 1, 1946) p. 5-6.

Table 2: (concluded)

Subject	Number of Hours					
	Infantry	Mechanized Cavalry	English	Field Artillery	Medical Corps	Anti-Aircraft Artillery
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Security..........	1	1	1	1	1	1
Weapons...........	2			12		
Tactical Training.	8	8				
Information Program	8	8	8	8	8	8
Totals...........	188	176	195	193	166	170

Table 3: War Department Training Programs for Training Military Police, Armored Training, Quartermaster Corps, Signal Corps, and Ordnance Units of the National Guard of the United States.[a/]

Subject	Number of Hours				
	Military Police	Armored Training	Quartermaster Corps	Signal Corps	Ordnance Units
(1)	(2)	(3)	(4)	(5)	(6)
AGF Proficiency Tests...........	22	22	22	22	22
Bayonet...........	4		4	4	
Chemical Warfare..	4	4	4	4	4
Commander's Time..	20	19	19	20	19
Compass...........	4	5	4	4	4
Defense...........	4	4	4	4	4
Drill and Ceremonies............	24	25	25	24	25

---

a/ National Guard Training Program, Training Program for Training (Military Police NGTP 19-1, Armoured Training NGTP 17-1, Quartermaster Corps 10-1, Signal Corps 11-1, Ordnance 9-1) Units of the National Guard of the United States, HQ AGF Washington, D.C., (August, 1946) p.5-7.

Table 3: (concluded)

Subject	Number of Hours				
	Military Police	Armored Training	Quartermaster Corps	Signal Corps	Ordnance Units
(1)	(2)	(3)	(4)	(5)	(6)
Martial Law.......	4	6	6	6	6
Equipment Care....	1	1	1	1	1
Grenades..........	4	4	4	4	4
Inspections.......	12	12	12	12	12
Interior Guard....	5	7	5	5	5
Communications....	2	6	2	2	2
Intelligence......	2	4	2	2	2
Map Reading.......	10	10	10	10	10
Marches and Bivouacs.............	16	16	16	16	16
Military Courtesy.	4	4	4	4	4
First Aid.........	6	6	6	6	6
Mines and Booby Traps..........	6	4	4	4	4
Army Organization.	1	1	1	1	1
Athletics and Physical Training...	8	8	8	8	8
Security..........	1	1	1	1	1
Weapons...........		1	16	49	49
Tactical Training.					
Information Program...........	8	8	8	8	8
Totals............	172	179	188	221	217

The composite program.-- By adding the items horizontally and taking an average, a composite list of subjects and hours making up the training of a soldier has been constructed:

Table 4: Composite Program based on Requirements for Training Eleven Different Units of the National Guard of the United States.

Table 4: (concluded)

Subject	Composite Program Hours
AGF Proficiency Tests............	22
Bayonet and Combat Formations......	3
Chemical Warfare Training..........	4
Commander's Time and Reviews.......	19
Compass...........................	4
Defense (Air and Ground Attack)...	4
Drill and Ceremonies..............	25
Martial Law and Domestic Disturbance	6
Equipment, Clothing, Tent Pitching.	2
Grenades, Hand and Rifle..........	2
Inspections......................	12
Interior Guard Duty..............	5
Signal Communications............	2
Intelligence Training............	2
Map and Photo Reading............	10
Marches and Bivouacs; Cooking......	16
Military Courtesy.................	4
Sanitation, First Aid, Hygiene.....	6
Mines and Booby Traps............	5
Army Organization and Uniforms.....	1
Athletics and Physical Training....	8
Censorship and Security...........	1
Care and Use of Weapons...........	12
Tactical Training..................	2
Troop Information Program..........	8
Total............................	189

Specifications for Basic Training Subjects

Although it is evident that some UMT and secondary-school subjects, such as physical training and hygiene, have much in common, before one can conclude definitely that a UMT subject is being taught or could be taught in high schools, it is necessary to examine the description of each army subject in more detail. Accord-

ingly, the War Department specifications for the basic training subjects are presented:[1]

AGF Proficiency Tests and Training Inspections a. Scope. The time allotted will be used to conduct training inspections and training tests to determine the status of training of individuals and units, to establish standards of proficiency, and to insure uniformity of training.

Bayonet-Combat Formations a. Scope. Purpose of combat formations; composition of rifle squad combat formations. Squad column and skirmishes. Movement and control of squad combat formations. Composition of rifle platoon wedge, and the antiaircraft formations. Movement and control of platoon combat formations. (Bayonet) Basic positions; guards, thrusts, withdrawals, slashes, strokes, and parries. Discuss the spirit of the bayonet.

Chemical Warfare Training (individual) a. Scope. Instruction in protective measures to be taken by individuals in defense against chemical attack, including characteristics of chemical agents; physiological effects of chemical agents on unprotected personnel; detection of chemical agents; familiarization with, use, and care of individual protective equipment; first aid for gas casualties; and decontamination of personnel and individual equipment.

Commander's Time for Review, etc. a. Scope. Review and Retraining.

Compass a. Scope. Description, nomenclature, and use of wrist and lensatic compass to include azimuth, back azimuth, polar coordinates and use on day and night marches.

Defense Against Air and Mechanized Attack a. Scope. Instruction in passive and active measures to be taken by individuals and small units in the defense against air and mechanized attack during foot and motor marches and in camps and bivouacs.

Drill and Ceremonies a. Scope. This course will cover the purpose of drill, drill of the soldier with and without arms, squad, platoon,

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[1] War Department National Guard Training Program HQ AGF Washington, D. C., (August, 1946) Quartermaster Training Program for Training Quartermaster Units of the National Guard of the United States, p. 7-15.

and company, parades, reviews, and other ceremonies. The bulk of time will be devoted to actual drill. Leadership of small units will be developed.

Martial Law and Domestic Disturbances a. Scope. This course will present the principles for the employment of troops during domestic disturbances. Courses will cover use of state troops, restrictions, procedures, and policies during intervention, martial law, crowd and mob tactics, squad and platoon formations, use of chemical agents, offensive action against a city, and restoration of order.

Equipment, Clothing, Tent Pitching a. Scope. Course will cover the responsibility for the care and maintenance of all equipment issued to the individual; instruction in the marking of clothing will be included. Instruction will be given in the selection of sites for the pitching of tents, methods of pitching, trenching, and striking tents.

Grenades, Hand and Rifle. a. Scope. Nomenclature, description, use capabilities, and limitations of all types of grenades including safety precautions. Familiarization firing of at least one grenade of each type.

Inspections a. Scope. Preparations for inspections.

Interior Guard Duty and Combat Sentry Duty a. Scope. Cover the purpose of guard duty, duties of officers, non-commissioned officers, and sentries, guard orders, special orders, posts, and reliefs. Sentinels as part of an outguard; organization, purpose, and action of combat sentinels.

Introduction of Signal Communications a. Scope. Instruction to include various means of signal communications; types of appropriate equipment, their purposes and uses; the phonetic alphabet; protection and care of wire lines and signal equipment. In this subject instruction should stress the principle that communications must be continually maintained.

Intelligence Training a. Scope. Instruction to stress the individual soldier's potential importance in gathering enemy information, the immediate processing of captured documents, obtaining and reporting shell reports, prompt transmission of all information pertaining to the

enemy and terrain, particularly that obtained by the individual and small units in contact with the enemy . Stress the importance of capturing prisoners as a source of enemy information.

Map and Aerial Photograph Reading a. Scope. Instruction to include conventional signs and symbols, marginal information, grid coordinates, preparation and use of overlays, practical knowledge of contouring, map scales, orientation of maps and individuals; orientation, determination of scale, ability to recognize common man-made and natural terrain features on aerial photos, and the use of the stereoscope. Emphasize ability to use the map in the field.

Marches and Bivouacs a. Scope. A study of administrative and tactical troop movements by vehicle and marching to include the Company, Battery, or Troop. Study of camps and bivouacs including location of area, kitchens, and latrines; light discipline in area, necessary outposts, interior guard, protection against attack by gas, armored vehicles, and aircraft. Application of the subject when practicable. Practical instruction in individual cooking to include requirements to prepare simple foods.

Military Courtesy a. Scope. Military Courtesy and Customs of the Service emphasizing the necessity of building an efficient military unit. Analogy to and comparison with similar courtesies and customs of civilian life. Articles of War. Regulations.

Sanitation, First Aid, and Hygiene a. Scope. Instruction in individual measures for personal hygiene, sec hygiene, and control of communicable diseases (to include field sanitation); first aid principles and measures; personal adjustment in the Army.

Mines and Booby Traps a. Scope. Instruction to include American mine doctrine; mine and mine field locating, laying, marking, and recording; study of American mines, firing devices, and their employment ; use of booby traps and examination of booby-trapped equipment.

Organization, Uniforms, and Insignia a. Scope. Brief outline of the general organization of the Army to include the mission of the Regular Army, National Guard, and the Organized Reserve; wearing of the uniform by members of the National Guard and suffieient instruction on rank insignia will be covered during this period.

Physical Training and Organized Athletics a. Scope. Individuals to receive actual instruction in prescribed "on duty" physical training and athletic program; limited text book instruction to stress need of physical development on the part of the individual and the importance of maintaining group physical efficiency regardless of walk of life. Actual instruction in body development and coordination.

Military Censorship and Protection of Military Information a. Scope. The object of this course is to enumerate and clarify the necessity and ways of protecting military information that would be of value to the enemy. The purpose of censorship, and its application to correspondence of individuals, publications, photographs, telephone, telegraph, and broadcasts.

Weapons a. Scope. Nomenclature, description, use, capabilities, and limitations of all weapons in T/O (Table of Organization) of unit. Field stripping, cleaning, and study of functions of parts of weapons. Range procedure and firing positions, use of sighting bar, and spotting exercises. (Much of this is now covered by secondary-school rifle clubs, which are sponsored by the National Rifle Association.)

Field Firing a. Scope. Practical application of range procedure, safety precautions, sighting and aiming, and positions on firing line. Qualifications in individual's T/O weapon and familiarization firing with other T/O weapons.

Tactical Training a. Scope. Concealment, camouflage, cover, movement, hasty fortifications, duties of scouts, observers, and messengers.

Troop Information Program a. Scope. Unit history from original activation to date; the growth and development of the National Guard to since 1903 to include World War II; the contributions of the National Guard to national defense and its achievements during this period; mission and role of the National Guard in national defense in the post war world. Relation of the National Guard to other components of the Army as prt of the national defense team; the importance of self-pride as essential to self-respect; dependability and integrity on the job as a necessity to individual pride; the importance of the soldier and his job to his unit and team members; the responsibility to do his job creditably and

> successfully as planned by his leaders; the price paid by team-member and higher units for the failure of the individual; the responsibilities of leaders to team-members.

Fort Knox Military Training Experiment

Combining military and secondary education.-- A cautious step in the direction of combining basic military training and conventional type education is being tried at Fort Knox, Kentucky, under the auspices of the Army. This experiment was described by Gilbert P. Bailey in the New York Times Magazine of February 23, 1947.[1]

"In this experiment one battalion of Regular Army volunteers is being trained in the manner the Army plans to train the teen-age civilian soldiers if Congress agrees. They gathered in 664 teen-age soldiers from training centers in 46 different states."

Mr. Bailey points out that the average age of the trainees was 17½ and that half of their schedule was devoted to moral and cultural training. Among the usual secondary-school features incorporated in the course were a glee club, demerit system, self-government with mock trials and juvenile juries, classes in art and music, chaperoned social functions, athletics, and field trips to places such as Mammoth Cave, St.

[1] Bailey, Gilbert, P., "Umtee's First Soldiers of the New Army", New York Times Magazine (February, 1947),p.11.

Joseph's Cathedral, and Lincoln's birthplace. The students or "rookies" were on friendly terms with the cadre-men who trained them, and they were endouraged to form and express their own opinions.

For four successive Sundays the trainee had to attend church services or a religious lecture, and as part of his regular training schedule he attended 33 lectures on citizenship and morality.

According to the author:

> So far the results of the experiment have been positive; so much so that only a hard-shelled minority of the cadre-men are saying, 'We ought to get a bunch of school teachers down here to run this school.' More than 25 per cent of the battalion is enrolled in correspondence courses and on-the-post classes in book-keeping, typing, automotive mechanics, and radio repair. Other classes will be offered in French and Public Speaking.
>
> The Army is trying the study-table method and some of the other conspiracies common to educators.. The most attractive room in the Camp is the study-room in the Information and Education school building, and classes fall on Thursday and Tuesday nights, UMT nights to stay on the post.

Legion Committee Report.-- The American Legion's "The National Legionnaire" gives another opinion on the UMT experiment at Fort Knox in reporting on the visit of the Legion's National Executive Committee to the Post to inspect the new unit.[1/]

[1/] Editorial, The National Legionnaire (May, 1947) 13:5.

What they saw and learned must have made the committeemen even more sold on the value of universal military training than they were before. One of the officers whose talk received the closest interest was the Protestant chaplain, who admitted that he came to the post rather unwillingly because he had to leave a post where he was comfortably housed, where he had a fine chapel, and because he 'was not sold' on the UMT idea. Now, howevever, he is an enthusiast. The course of instruction in the experimental unit is uplifting the moral status of the trainees; they have an interest in spiritual and social standards, and will leave the course of training better young men, better soldiers, and better Americans. There is no profanity in the unit; no gambling; no alcoholics are there obtainable.

From what the National Executive Committee members saw at Fort Knox, they could leave, content that basic training in a UMT camp (if the training and the cadre at Fort Knox is a sample of what may be expected) will be good for the trainee, good for his family, good for the community to which he returns after he completes his training, and good for the nation, on the counts of physical, mental, moral, and social improvement.

U. M. T. Basic Training Program.-- The detailed program for the eleven week basic training phase of the Fort Knox experiment is as follows:1/

Subject	Hours
Reception, examination, aptitude test classification	80
Physical Training Calisthenics, obstacle course, hand to hand fighting, disarming tactics, swimming and life saving and organized athletics	48
Information and Education	8
Civil Defense Mob phsychology, disaster measures emergency sanitary measures, fire fighting	16
First Aid, Military Sanitation, Personal Hygiene	18

1/ Universal Military Training Experimental Unit, Basic Training Phase, 11 weeks program, Fort Knox, Kentucky.

Subject	Hours
Basic Individual Weapons	
Mechanical Training	6
Transition firing	8
Marksmanship	56
Secondary Individual Weapons	
Mechanical Training	6
Marksmanship	12
Dismounted Drill and Ceremonies	24
Inspection and Unit tests	16
Personal Affairs of Trainees and their Dependents	4
Elementary Map and Aerial Photo Reading	8
Equipment, Clothing (including proper fit and use in wet and cold climate) and Tent Pitching	8
Guard Duty	10
Marches and Bivouacs (including security measures, individual cooking and use of rations)	16
Military Courtesy, discipline, regulations covering trainees	6
Motor movements, entrucking and detrucking	4
Organization of the Army, uniforms and insignia	6
Miscellaneous	40
Total	400

This program is very similar to that prescribed for the National Guard, though the former allows roughly twice the time per subject as the latter and does not include Bayonet Training.

CHAPTER III

THE PROGRAM OF STUDIES IN GRADES 10, 11, and 12

Limiting Factors

Secondary school population.-- The possibility of giving universal military training through the medium of the secondary school is obviously limited at the present time by certain factors.

All of our young people do not reach high school, and the President's Commission Report quoted pertinent figures on this point.[1] Some of these figures are shown in Table 5.

Table 5: Schooling of Selectees

Amount of Education	Per Cent of White Selectees in World War II
College............................	11
High School graduates................	30
High school non-graduates..........	28
Grade school and no schooling......	31

> Of the negro selectees in the early years of World War II, 63 per cent from the north and 33 per cent from the south had attended high school, as compared with 14 per cent and three per cent,

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[1] President's Advisory Commission, Op. cit., p. 169.

respectively, at the time of World War 1.

> Census figures for 1940 indicate that all men in the age group 18-44, only 5.3 per cent had less than four years of formal schooling. The median number of years of schooling they had completed was 9.4 years, or the equivalent of little more than a year of high school. For the younger men aged 18-34, the median was 10.2 years.

It is evident that about two-thirds of our white young men, and half of our negroes do enter high school. Another important limiting factor is that not all high school matriculates continue on to graduate. According to the Commission's report 11 per cent of the white selectees went to college and another 30 per cent graduated from high school.[1]

Existing high school curriculum.-- A most important question to be considered by this study concerns the nature of the existing high school curriculum. In a country which offers such widely varying educational opportunities as the United States, with high schools ranging from giant metropolitan plants housing thousands of students to "cross-roads" institutions of less than fifty, it would be impossible to find the average high school. Consequently, the number of different curricula is nearly as great as the number of different schools. However, it will be demonstrated that certain subjects such as English, American Hist-

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[1] Ibid, p. 169.

ory, and general science are found on practically every curriculum, though the material covered in a specific subject would vary with the section, state, community, school, and teacher. For the purpose of this study it will be sufficient to demonstrate that one could reasonably expect to find certain subjects comprising the curriculum of an average of better-than-average American high school.

The National Survey of Secondary Education.-- Additional data regarding the "existing secondary-school curriculum" was obtained from the National Survey of Secondary Education.[1/] Loomis and Lide commenting on the study of trends represented by the 152 schools from all parts of the country included in Group II, say,

> Requirements in major subject fields.-- Considerable variation is shown in the amount of work required by different schools in the several subject fields. Nearly four units of English are required, however, for all types of programs. In addition to this requirement, the median school of Group II, employing the constants-with-variables type of program, in 1930-31 required 1-8 units of history, 0.7 units in social studies, 1.5 units in mathematics, and o.9 units in science.

Their observations about the senior high school program of studies include:

[1/] A. K. Loomis, Edwin S. Lide, B. Lamar Johnson, The Program of Studies, Bulletin No. 17, National Survey of Secondary Education, U. S. Office of Education, Washington, D. C., 1932, Monograph No. 19, p. 155.

> In the group of 35 schools whose changes of programs over a quarter century were studied, the number of different courses has increased about 55 per cent. The increments are most marked in the non-academic fields. In the academic fields, the increments are largest for the social studies and smallest for mathematics. In the non-academic fields, the increments are greatest for commerce, fine arts, and industrial arts. Percentages of actual enrollment in each subject field, computed in the study of fifteen schools over a period of six years, show increments especially noticeable in the social studies and commerce, and large decreases for mathematics and foreign languages.
>
> The required work.--
>
> English, social studies, and physical education are the only fields required by a majority of schools. Less than half the schools require algebra and plane geometry. Some schools require art, music, industrial arts, home economics, and socializing integrative activities in grade nine, but few requirements occur in grade ten and twelve outside the fields of English, social studies, physical education and mathematics.... In the senior or four-year high school, trends indicate that three or four years of English, social studies, and physical education will be required.1/

The titles of the various monographs on instruction in the National Survey in themselves indicate the subjects which make up the typical high school curriculum. The subjects mentioned are: English, social studies, science, mathematics, foriegn languages, music and art, nonathletic extracurricular activities, intramural and interscholastic athletics, and health work and physical education.

1/ Leonard V. Koos and staff, Summary, Bulletin No. 17, National Survey of Secondary Education, U. S. Office of Education, Washington, D. C., Monograph No. 1, 1932,p.175.

According to the summary monograph the total of courses outlined represented in the work of analysis was not far from 800.

The smaller schools.-- Ferriss, after studying the smaller secondary schools reports in the National Survey, "Taken as a whole, the data shows that the major requirements are in the fields of English, mathematics, science, history, and civics."[1]

Loomis concluded,[2] "In the senior or four year high school, trends indicate that three or four years of English, social studies, and physical education will be required."

As an indication of the status of required subjects in the existing high school curriculum, the following table has been constructed after one in the Program of Studies monograph. According to Loomis, "The trends shown will therefore typify the high schools of medium size rather than all high schools of the country .... there is a moderately representative sampling of the States from each geographical section". Group I includes 54 cities averaging 8,922 population and Group II 152 cities averaging 9670.

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[1] Emery N. Ferriss, W. H. Gaumnitz, P. Roy Brammell, The Smaller Secondary Schools, Bulletin No. 17, National Survey of Secondary Education, United States Office of Education , Washington, D.C., 1932, Monograph No.6,p.119.

[2] Ibid. p. 115.

Table 6: Status of Required Subjects in the Existing High School Curriculum, 1930-31.

Schools	Subject-Matter Requirements	
	Percentage of Schools Requiring the Subject	Median Number of Units Required
Group I		
English........	100	3.8
History........	96.3	1.3
Social Studies.	70.4	0.3
Mathematics....	63.0	0.9
Natural Science	57.4	0.2
Physical Education.........	70.4	0.3
Group II		
English........	100	3.8
History........	96.2	1.8
Social Studies,	69.2	0.7
Mathematics....	69.2	1.5
Natural Science	67.3	0.9
Physical Education........	42.3	0.0

Loomis summarizes the data presented in the table as follows:

> If we may arrive at a composite for the median school requirement by adding the separate medians computed for the different subject fields, the results will show the median school employing the constants-with-variables type of program in Group I, for 1930-31 requiring 6.8 units of work of all pupils, distributed as follows: English 3.8; history 1.3; social studies 0.3; mathematics 0.9; science 0.2; physical education 0.3.

The typical secondary-school curriculum.-- Evidently the subjects which may reasonably be expected to appear in the curriculum of almost any American high school are the following: English, civics, American history, general science, physics or biology, math-

ematics, physical education, music, and art.

Pre-induction high school subjects.--

North Carolina.--The publication "Education for Victory" calls attention to some of the pre-induction subjects which were presented with success by secondary schools during the war. Ralph J. Andrews, Coordinator for the North Carolina State Department of Education reports as follows:[1]

Table 7: Pre-induction Subjects in North Carolina

Subject	Enrollment	Percentage of High School Enrollment
Fundamentals of Electricity................	3,480	2.4
Fundamentals of Auto Mechanics.............	870	0.6
Fundamentals of Machines	3,770	2.6
Fundamentals of Shop Work	3,045	2.1
Fundamentals Radio Code..	2,775	1.1
Physical Education.......	58,000	37.0
Health...................	33,350	22.1
Military Drill...........	725	0.5
Pre-flight Aeronautics...	2,030	1.4
First Aid................	3,945	1.3
Driver Education.........	11,195	9.1
Photography..............		
Sheet Metal..............	900	.6
Welding..................	1,100	.8
Carpentry................	3,485	2.5
English..................	7,830	5.4
Issues of War............	11,020	7.6
Simple Mathematics.......	8,555	5.9
Clerical Procedures......	1,305	.9

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[1] Ralph J. Andrews, Education for Victory, Victory Corps Activities publication, School year 1943-44, September, 1944), Washington, D.C., 3:5.

Table 7: (concluded)

Subject	Enroll-ment	Percentage of High School Enrollment
Mechanical Drawing.......	900	.6
Engineering..............	900	.6
Additional Subjects......	7,250	
Total....................	165,945	115.0

Also typical of the results obtained in other states were the reports from California and Montana.[1]

California.-- Frank B. Lindsay, Chief of The Division of Secondary Education, State Department of Education reported specific training in pre-induction courses as shown in Table 8 for 400 senior and four-year high schools.

Table 8: Pre-induction Subjects in California

Course	Number of Schools	Pupils Enrolled
Aeronautics.........	194	4,661
Automative Mechanics	206	12,442
Basic Electricity...	158	5,775
Machine Shop Practice................	142	7,822
Radio...............	143	3,662
Shop Mechanics......	316	25,892
Aircraft Maintenance	32	2,288
Machines............	78	2,839
Physics.............	400	11,146
Chemistry...........	400	27,766
Trigonometry........	400	5,610

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[1] Ibid. p.13.

Montana.-- A. J. Woodward reported the number of high schools in Montana offering pre-induction courses, as shown in Table 9.

Table 9: Pre-induction Subjects in Montana

Pre-Induction Courses	Number of High Schools
Electricity	40
Machines	25
Shop Work	10
Radio	23
Auto Mechanics	31
Vocational Mechanics	10
Aircraft Maintenance	1
Radio Code	23
Pre-flight Aeronautics	54
Map Reading	54
Health, Sanitation, First Aid	85
Army Clerical Procedures	2
Driver Education	14
Modified English Courses	28
Modified Mathematics Courses	70
Modified Physics Courses	86
Conservation of Resources	35
International Problems, Global Geography	20
World Problems	211

While the courses mentioned in "Education for Victory" cannot be considered as common to the typical high school curriculum, the fact that they have been offered successfully by hundreds of secondary schools indicates that they could be part of a curriculum designed to achieve in peacetime what was done under war time pressure. Of especial significance is the fact that high school facilities, teachers, and time,

were used to expedite the process of making soldiers out of our secondary school students.

Subject-Matter Content

Since the existing high-school curriculum evidently includes English, social studies, science, mathematics, foreign languages, music and art, non-athletic extracurricular activities, intramural and interscholastic athletics, and health work and physical education, these subjects will be analyzed in the light of current practice as shown by the National Survey and other studies.

English in the secondary-school program.-- According to Billett,[1/]

> Of all the subject matter fields represented in the secondary-school program of studies, English occupies the most prominent place. As a general rule, in better-than-average secondary schools each pupil gives at least one period of each school day to some required course in English throughout his entire secondary-school career; and in many secondary schools, he may elect additional courses in English in one or more years.

In regard to the amount of time devoted to English, Smith says,[2/] "For senior high schools the time allotment is rarely mentioned, five periods a week apparently being the accepted norm."

[1/] Roy O. Billett, Fundamentals of Secondary-School Teaching, Houghton Mifflin Company, New York, 1940, p.188.

[2/] Dora V. Smith, Instruction in English, Bulletin No.17, National Survey of Secondary Education, US Office of Education, Washington, D.C., 1932, Monograph No. 20.

Boston University
School of Education
Library

Since there appears to be no close relationship between the military subject matter outlined in the previous chapter and high school English, there will be no attempt to break down the existing English course of study into its components. However, courtesy, the ability to write clearly, the ability to speak in public, reading skill, and other objectives of English classes could be integrated with the objectives of military training.

Social Studies in the secondary-school program.-- According to Billett,[1]

> From these and other facts made available by the two investigations, it is fair to conclude that the most common or model social-studies offerings at the senior-high-school level are: Grade 10 - world history or civilization; grade 11 - American or United States history; grade 12 - two half-year courses, or a one year course, selected from economics, advanced civics or government, problems of democracy, and sociology.

In the National Survey, Kimmel said,[2]

> There seem to be certain rather well defined patterns and sequences of courses in the offerings at the senior high school level. Courses in world history in grade 10; United States or American history combined in some cities with civics in grade 11, and semester courses in economics, sociology, or civics in grade 12, seem to constitute a favored program in 13 cities with variations in types of additional elective courses.

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[1] Billett, Op. cit. p. 51.

[2] William G. Kimmel, Instruction in Social Studies, Bulletin No.17, National Survey of Secondary Education, U.S. Office of Education, Washington, D.C., Monograph No.21, 1932, p.16.

Since there appears to be similarity between some of the objectives of the social studies program and military training a detailed analysis of the former will be made. In Swindler's analysis of 60 social studies courses as rearranged by Kimmel for the National Survey, the following general objectives were listed with the number in parenthesis indicating the frequency of occurrence.

Table 10: The Fequency of Occurrence of General Objectives Listed in Sixty Social Studies Courses.

Objectives	Frequency of Occurrence
1. Socio-civic efficiency.............	176
2. Participation in civic activities...	127
3. Information as a basis for participation..............	116
4. Making the world intelligible for pupils...........................	114
5. Knowledge of civic rights, duties and responsibilities..................	112
6. Ability to think, discriminate, and judge...........................	104
7. Knowledge of social, economic, and political principles..............	93
8. Knowledge of past in order to interpret the present.................	87
9. Intelligent patriotism.............	85
10. Service and cooperation in society..	83
11. Respect for law and institutions....	74
12. Knowledge of moral, ethical, and religious principles..............	71
13. Appreciation of the interdependence of nations.......................	63
14. Understanding the principles of the constitutions and democracy.......	61
15. Proper attitudes and interests.....	60
16. Worthy use of leisure time.........	53
17. Tolerance and open-mindedness......	44

Table 10: (concluded)

Objectives	Frequency of Occurrence
18. Broadening interests and sympathies..	44
19. Orderly development for a static world................................	41
20. Vocational efficiency.................	40
21. Mating of tools and skills...........	34
22. Understanding of the influences of environment........................	28
23. Awareness of the meaning of living together in organized society........	28
24. General culture........................	27
25. Cultivation of an interest in reading the social studies for pleasure....	25
26. Health and efficiency................	25
27. Appreciation of historical and scientific methods......................	18
28. Worthy home membership................	15

Science in the secondary-school program.-- Billett[1] reports:

> Just about as certainly, the science offering, if any, in grade 10 is biology, and in grades 11 and 12, chemistry or physics (in grade 11 chemistry is offered somewhat more frequently than physics, and in grade 12 physics is offered somewhat more frequently than chemistry).
>
> In answer to the first question, a recent investigation conducted in the United States Office of Education and involving nearly eighteen thousand secondary schools and almost five and a half million pupils may be cited, showing that in the year 1934 in the last four years of high school, only 39 per cent of the pupils were registered for courses in general science, biology, chemistry and physics. Stated negatively, at least three-fifths of the pupils were not enrolled in any of the major science courses.

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[1] Ibid. p.257

The National Survey investigated the teaching of science in the secondary schools of 26 states by analyzing 58 courses in general science, 45 courses in biology, 27 courses in physics, and 30 courses in chemistry.[1/]

The units of general science regarding which there was some agreement were as follows: Weather, electricity, heating, homes, foods, machines, lighting homes, transportation, communication, clothing, air and its use, heavenly bodies.

Regarding biology, Beauchamp reports: "Forty courses of the 45 analyzed have divided the field of biology into three major divisions: one devoted to plants, one focused on animals, and another directed towards a study of man."

According to Beauchamp the topics in all the courses in physics "....were classified easily under the headings: Mechanics, heat, magnetism, electricity, sound, and light."

About chemistry Beauchamp writes:

> The topics included in courses in chemistry are of three types: (1) those dealing with principles of chemistry; (2) those dealing with descriptions of elements or compounds; (3) those

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[1/] W.L. Beauchamp, Instruction in Science, Bulletin No.17, National Survey of Secondary Education, U.S. Office of Education, Washington, D. C., 1932, Monograph No. 22.

> dealing with applied chemistry. As a rule, courses contain all of these types of topics .... In all the courses it has been found necessary to insert topics on the gas laws, the chemical nature of matter, solutions, periodic law, chemical nomenclature, and formulas and equations. Sixty-eight per cent of the courses included topics such as fuel, food, clothing, fertilizers, cleaning agents, poisons and antidotes, glass, clay products, paints, and alloys.

Mathematics in the secondary-school program.-- Billett reports:[1]

> In about three-fourths of the schools included in Lide's investigation, plane geometry is offered in grade 10. In about half of these schools solid geometry is offered; and in the same grade of about a third of these schools, advanced algebra may be elected.
>
> Mathematics is required of all pupils in about one in seven of these schools in grade 10; in about one in twenty-one in grade 11; and none in grade 12. That is, as a rule, mathematics courses are elective in the senior high school.

While it is evident that many high school students do not take mathematics, and this subject field apparently has little in common with the objectives of basic military training, a table of objectives based on Lide's analysis of 17 course outlines for grades 10,11, and 12, is presented.[2]

Table 11: Objectives for Course in Mathematics and the Frequency with Which They Occur in the Better-Than-Average High Schools.

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[1] Ibid. p.288

[2] Edwin S. Lide, Instruction in Mathematics, Bulletin No.17, National Survey of Secondary Education, U.S. Office of Education, Washington, D.C., 1932, Monograph No. 23, p.43.

Table 11: (concluded)

Objectives	Frequency
Accuracy and facility in fundamental processes:	12
Computation	5
Geometry	4
Problem solving	3
Algebra	3
Knowledge and power to apply mathematical concepts	8
Mathematical law	4
Use of symbolic notations	3
Specific knowledge useful in life	5
Understanding and interpreting graphs	5
Exploration and guidance	3
Disciplinary values	15
Mental habits; precision, accuracy	10
Thinking in terms of relationships	7
Logical reasoning	6
Logical structure	4
Discrimination between true and false	4
Quantitative relations	4
Cultural values	17
Mathematics to civilization	6
Beauty of geometric design	6
Power of applied mathematics	4
Habits and attitudes	4
Originality	4
Specific future needs of well defined groups	7

Foreign language in the secondary-school program.--Basic military training does not include any element of foreign language instruction, sothe offering in this field will not be analyzed.

Music and Art in the secondary-school program.--Music and art instruction are not included in basic military training, so the offering in this field will not be analyzed.

Nonathletic extracurriculum activities in the secondary-school program.-- The National Survey[1] covered 224 schools on this question. Among the many activities studied, those which follow special interests having something in common with military training were: Safety Patrol, Sanitation Squad, Boy Scouts, Publications, Boys' Cooking, Camp Cooking, Gymnastics, Health, Scoutcraft, Tumbling, Nature, Handicraft, First Aid, Outdoor, Recreation, Rifle, Swimming, Fencing, Sketching, Woodcraft.

Intramural and interscholastic athletics in the secondary-school program.-- The National Survey investigated 327 schools representing all 48 states.[2]

Brammell reported the leading intramural sports in which the boys of grades 10,11, and 12 participated were: Basketball, Track and Field, Baseball, Tennis, Football, Volleyball, Golf, Swimming, Gymnastics, Soccer, Wrestling, Boxing.

Brammell also reported, "Almost without exception, the 327 secondary-schools included in this study report that they engage in interscholastic contests in athletics, especially for boys".

1/ W.C. Reavis, and G.E. Van Dyke, Nonathletic Extracurriculum Activities, Bulletin No.17, National Survey of Secondary Education, U.S. Office of Education, Washinton, D.C., 1932, Monograph No.26, p.15.

2/ P. Roy Brammell, Intramural and Interscholastic Athletics, Bulletin No.17, National Survey of Secondary Education, U.S. Office of Education, Washington, D.C., 1932, Monograph No.27, p.13.

The 12 most popular interscholastic sports are: Basketball, Football, Track and Field, Baseball, Tennis, Golf, Swimming, Soccer, Cross-country, Wrestling, Hockey, and Volley-ball.

The monograph on athletics devotes some space to the character-building effect of sports, an objective which secondary education shares with military training.

> A list of 17 traits of character has been compiled from several sources, which is a representative list of the traits claimed by various agencies to be developed, or are capable of being developed, by participation in interscholastic athletics. The list of traits is as follows: sacrifice, self-control, self-respect, honor, initiative, team-play, loyalty, social-mindedness, courtesy, courage, trustworthiness, chivalry, cheerfulness, aggressiveness, obedience, responsibility, happiness.

Health and Physical Education.-- An important part of military training is devoted to health education and physical training, and since these subjects are commonly found in secondary schools, a detailed comparison of the objectives in this field will be made. The National Survey reported that physical education was required in approximately three-fourths of the 460 schools studied. According to Brammell,[1] "Nevertheless, it is clear that physical education has become fixed in the curri-

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[1] P. Roy Brammell, Health Work and Physical Education, Bulletin No. 17, U.S. Office of Education, Washington, D. C., 1932, Monograph No. 28, National Survey of Secondary Education, p.74-75.

culum of the secondary schools, not merely as an elective, but as a required subject .... classes are most frequently held twice a week."

Further on Brammell points out,[1] "The physical activities fostered by the schools make up a list of 17 .... The six activities reported by the largest number of schools are listed Table 27." Reference to this table shows the following to be the activities in question: intramural athletics, interscholastic athletics, gymnastics, organized activities, corrective physical education, military training.[2]

> **Eleven other activities were reported, as follows:** random games, dancing, swimming, rhythm, camping, hiking, etc., supervised outdoor play; military training for Boy Scouts; home-room activities; May Day programs and winter exhibitions; leader's corps; and clubs, for example, sports, swimming, apparatus, etc."

Brammell reported on health education examination's[3]

> The requirement reported by the largest number of schools, as indicated in Table 12, specifies that the pupils shall be examined once during the school year .... More significant than the detailed requirements is the fact that, when all the data are taken into account in most of the schools included in this investigation, the pupils receive health examinations one or more times, usually more than once, during their secondary-school careers.

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[1] Ibid, p.78

[2] **Loc.cit.**

[3] Ibid, p.27

According to Brammell[1] "More than half (248) of the schools indicate that they have outlines of study for health instruction .... From these data it is plain that schools most frequently use the physical education workers to give health instruction." Among the thirty-seven different names applied to courses in health were the following: sanitation and hygiene, first aid, public health, and general health.

Military training.--[2] According to the National Survey, the number of schools reporting military training as being included in the program of physical activities was only 29 of the 460 schools represented in the tabulations.

Conclusion.-- The evidence brought out in this chapter indicates that while the American secondary school situation is characterized by an infinite variety of subject offering and requirements, the typical curriculum includes English, social studies, science, mathematics, foreign languages, music and art, non-athletic extracurricular activities, intramural and interscholastic athletics, and health work and physical education.Breaking these subjects down into their essential elements has served two purposes: 1. Indication

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[1] Ibid. p. 30-31

[2] Ibid. p. 79.

that many of the general secondary school objectives, such as "Intelligent Patriotism" mentioned in Swindler's study of the social sciences, are obviously general military training objectives.[1] 2. Indication that many specific secondary school objectives, such as the development of first aid skills,[2] are exactly the same as those of the army training program. The elements of the military and secondary school programs will be closely compared in the next chapter.

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[1] Swindler, Op. cit., p. 53.

[2] Reavis, Op. cit., p. 58

CHAPTER IV

COMPARISON OF ARMY TRAINING PROGRAM AND THE PROGRAM OF STUDIES

Military Training in the Public Schools

Review of public opinion.-- Professors Carpenter and Capps have suggested that the upper secondary school might be used for a modified form of military training,[1] and Dr. Pittenger thought that the Army should be another agency with which education conducts cooperative training.[2] Moehlman thought many of the essentials of good defense preparation can and should be taught in our public schools,[3] and Superintendent Lyons pointed out how our present physical education program was inspired by World War I man-power defects, but has failed to accomplish its original objective.[4] Deanne Malott expressed the idea that 12 months of training by the army would mean an unnecessary and undesirable duplication of our public educ-

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[1] Carpenter, Op. cit.,

[2] Pittenger, Op. cit.

[3] Moehlman, Op. cit.

[4] Lyons, Op. cit.

ation system.[1] Although the President's Commission did not believe that any portion of the universal military training program could be successfully undertaken by the secondary schools, there was nothing but an opinion to substantiate this statement, and the Commission did say that "courses in first aid, map reading, physical training, fire-fighting, hygiene, sanitation, etc. which are proposed for the basic training curriculum, might be well taught as part of secondary-school education".[2]

Since the purpose of this study is to determine what portion of a military training program could be taught in our secondary schools, the elements of the military training program, as analyzed in Chapter II, and the elements of the typical high school program, as analyzed in Chapter III, will be placed in juxtaposition for comparison.

Although it is evident that some military and secondary-school subjects, such as physical training and hygiene have much in common, before one can conclude that all or part of a military subject is being taught or could be taught in high schools, it will be necessary to compare the elements of the subjects

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[1] Malott, Op. cit., p. 14.

[2] President's Advisory Commission, Op. cit., p. 20.

which the two training systems appear to have in common. The "Composite Program"[1] is again presented with notations indicating those subjects which appear to parallel those of the secondary-school program and those which do not.

The composite program.--

Table 13: Composite Program based on Requirements for Training Eleven Different Units of the National Guard of the United States.

Subject	Composite Program	
	Hours	
AGF Proficiency Tests..................	22	No parallel
Bayonet-Combat Formations..............	3	No parallel
Chemical Warfare Training..............	4	Apparent parallel
Commander's Time-Reviews...............	19	No parallel
Compass................................	4	Apparent parallel
Defense (Air-Ground Attack)............	4	No parallel
Drill and Ceremonies...................	25	No parallel
Martial Law-Domestic Disturbance.......	6	No parallel
Equipment, Clothing, Tent Pitching....	2	No parallel
Grenades, Hand and Rifle...............	2	No parallel
Inspections............................	12	No parallel
Interior Guard Duty....................	5	No parallel
Signal Communications..................	2	Apparent parallel
Intelligence Training..................	2	No parallel
Map and Photo Reading..................	10	Apparent parallel
Marches and Bivouacs-Cooking...........	16	Apparent parallel
Military Courtesy......................	4	Apparent parallel
Sanitation, First Aid, Hygiene.........	6	Apparent parallel
Mines and Booby Traps..................	5	No parallel

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[1] Refer to Table 4, Chapter II, p. 33, The Composite Program.

Table 13: (Concluded)

Subject	Composite Program	
	Hours	
Army Orgainization, Uniforms............	1	No parallel
Athletics-Physical Training.............	8	Apparent parallel
Censorship and Security.................	1	No parallel
Care and Use of Weapons.................	12	No parallel
Tactical Training.......................	2	No parallel
Troop Information Program...............	8	Apparent parallel
Total...................................	189	

Taking out the subjects labeled "Apparent Parallel" we have:

Chemical Warfare Training	4 hours
Compass	4 "
Signal Communications	2 "
Map and Photo Reading	2 "
Military Courtesy	4 "
Sanitation, First, Aid, Hygiene	6 "
Athletics-Physical Training	8 "
Troop Information Program	8 "
	46

Point for Point Comparison

Close comparison of the above listed subjects with those they appear to parallel in the secondary school field follows:

Chemical Warfare Training (individual) a. Scope. Instruction in protective measures to be taken by individuals in defense against chemical attack, including characteristics of chemical agents; physiological effects of chemical agents

> on unprotected personnel; detection of chemical agents; familiarization with, use, and care of decontamination of personnel and individual equipment.[1]

High School Chemistfy.-- According to Beauchamp[2]

> In all the courses it has been found necessary to insert topics on the gas laws, the chemical nature of matter, solutions, periodic law, chemical nomenclature, and formulas and equations. Sixty-eight per cent of the courses included topics such as fuel, food, clothing, fertilizers, cleaning agents, poisons and antidotes, glass, clay products, paints, and alloys.

Since both the military and high school chemistry training embrace the study of gases, poisons, and antidotes, and the military requirement is only four hours, or the equivalent of one period a day for a week in the secondary school, the military subject could be easily added to secondary-school chemistry. The writer knows from actual experience in both teaching fields, that the content of the military chemistry is relatively simple compared to the high school subject, and could be effectively presented by the average secondary-school science teacher.

> Compass a. Scope. Description, nomenclature, and use of wrist and lensatic compass to include azimuth, back azimuth, polar coordinates and use on day and night marches. [3]

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[1] National Guard Training Program, Op. cit., p. 34.

[2] Beauchamp, Op. cit., p. 55-56.

[3] National Guard Training Program, Op. cit.

This military subject would logically parallel general science which according to Beauchamp[1] includes electricity; and physics, which the same authority found included magnetism and electricity.[2] Nothing in the army representation of the subject is more difficult than the work done at the junior high schoolscience level, with the emphasis in both situations being on the ability to use a compass effectively. The army requirement of four hours would represent about a week's work for the average high school general science or physics class.

> Introduction to Signal Communications. a. Scope. Instruction to include various means of signal communicational types of appropriate equipment, their purposes and uses; the phonetic alphabet; protection and care of wire lines and signal equipment. In this subject instruction should stress the principle that communications must be continually maintained.[3]

It is obvious from the fast that only two hours is devoted to this course in the army curriculum, that it cannot be more than a quick survey. Again referring to Beauchamp[4] we find that general science includes communication as well as electricity and machines, while physics[5] includes mechanics, magnetism,

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[1] Beauchamp, Op. cit.

[2] Loc. cit.

[3] National Guard Training Program, Op. cit.

[4] Beauchamp, Op. cit.

[5] Loc. cit.

electricity, sound and light. These two high school subjects are so broad, and the military objectives so limited, that general science and physics could include in two days work or less, all the entire military requirement.

> Map and Aerial Photograph Reading a. Scope. Instruction to include conventional signs and symbols, marginal information, grid coordinates, preparation and use of overlays, practical knowledge of contouring, map scales, orientation of maps and individuals; orientation, determination of scale, ability to recognize common man-made and natural terrain features on aerial photos, and the use of the stereoscope. Emphasize ability to use the map in the field.[1]

This subject has elements in common with more high school courses than perhaps any other. Obviously the familiarization with signs, overlays, symbols, scales, and contouring comes within the scope of geography teaching at any level. The ability to orient a map, to understand marginal information, and to ascertain locations by means of the textbook map's simple grid system, are skills which are associated with the junior high social studies level. The use of the stereoscope falls within the province of the physics teacher, or any instructor who employs third-dimensial visual aids such as the Vue Master. Among the various elements of this military subject the only one which apparently has no parallel in secondary

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[1] National Guard Training Program, Op. cit.

school teaching is the interpretation of aerial photos, but the others, which make up most of the ten hours military requirement, could easily be superimposed on existing courses.

"Military Courtesy a. Scope. Military Courtesy and Customs of the Service emphasizing the necessity of building an efficient military unit. Analogy to and comparison with similar courtesies and customs of civilian life. Articles of War. Regulations."[1]

Secondary schools do not prescribe "Courtesy" as a subject, though courtesy is expected, and etiquette and "behave-yourself" classes of some sort may be found on many extra-curricular offerings. In this field the Army requires more than the school, and enforces courtesy regulations and customs of the service very strictly. While it might not be advisable to try to incorporate military courtesy practices in secondary-school life, familiarization with the military system and a comparison with accepted civilian practice might indirectly improve the courtesy level in our high schools.

At first glance the Articles of War and Army Regulations would not seem to have anything in common with high school teaching, but they could be incorpor-

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[1] National Guard Training Program, Op. cit.

ated in a social studies course which was planned to include the common objective, "knowledge of civic rights, duties, and responsibilities" mentioned in Swindler's study.[1/]

The army's four hour requirement for military courtesy would not because of its nature be superimposed on any one course, but its elements could easily be disseminated in all classes as part of an integrated general education program.

"Sanitation, First Aid, and Hygiene. a. Scope. Instruction in individual measures for personal hygiene, sex hygiene, and control of communicable diseases (to include field sanitation); first aid principles and measures; personal adjustment in the army.[2/]"

The similarity between the elements of this army subject and the most popular names: sanitation, hygiene, first aid, public health, and general health, which Brammell[3/] found were applied to secondary health instruction, indicates the close relationship between the military and secondary school objectives in this field. Sex hygiene is not offered in many schools, but personal adjustment would certainly come within the scope

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1/ Swindler, Op. cit.

2/ National Guard Training Program, Op. cit.

3/ Brammell, Op. cit.

of the guidance department's activities. Some of the elements of this subject undoubtedly come under biology and general science, and the total requirement of six hours represents less than two weeks work in one high school subject.

> Physical Training and Organized Athletics a. Scope. Individuals to receive actual instruction in prescribed "on duty" physical training and athletic program; limited textbook instruction to stress need of physical development on the part of the individual and the importance of maintaining group physical effeciency regardless of walk of life. Actual instruction in body development and coordination. 1/

Neither the army nor the National Survey is very specific as to what constitutes "physical training and organized athletics" beyond mentioning certain general objectives such as those above, and games which are common to American youth. Brammell reported 2/ that the most popular interscholastic sports are basketball, football, track and field, baseball, tennis, golf, swimming, soccer, cross-country, wrestling, hockey and volleyball, and all but tennis, golf, and hockey are part of the typical military sports program. The same author 3/ names gymnastics and boxing, in addition to the interscholastic sports mentioned, as the

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1/ National Guard Training Program, Op. cit.

2/ Brammell, Op. cit.

3/ Loc. cit.

leading intramural athletic activities, and both of these are offerd by the army.

Of the seventeen physical activities fostered by the schools studied by Brammell[1] the following have definite military significance: intramural athletics, interscholastic athletics, gymnastics, corrective physical education, military training, random games, swimming, rhythm, camping, hiking, supervised outdoor play, military training for Boy Scouts and leader's corps. The time alloted by the army for athletics and physical training is eight hours, or about the equivalent of a months work in a school which offers physical education twice a week.

Troop Information Program a. Scope. Unit history from original activation to date; the

> hi growth and development of the National Guard since 1903 to include World War II; the contributions of the National Guard to national defense and its achievements during this period; mission and role of the National Guard in national defense in the post-war world. Relation of the National Guard to other components of the army as part of the national defense team; the importance of self-pride as essential to self-respect; dependability and integrity on the job as a necessity to individual pride; the importance of the soldier and his job to his unit and team members; the responsibility to do his job creditably and successfully as planned by his leaders; the price paid by team-member and higher units for the failure of the individual; the responsibilities to team-members. [2]

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[1] Brammell, Op. cit.

[2] National Guard Training Program, Op. cit.

The objectives outlined in the first sentence above, mention the National Guard in places where the word "army" would appear if the training program used in this study had not been adapted for National Guard use. This part of the program represents American military history and should be presented as part of secondary school social studies. As for the character trait development making up the second part of the program this is paralleled by the 17 traits mentioned by Brammell[1/] as being developed or claimed to be developed by participation in interscholastic athletics. These are sacrifice, self-control, self-respect, honor, initiative, team-play, loyalty, social-mindedness, courtesy, courage, trustworthiness, chivalry, cheerfulness, aggressiveness, obedience, responsibility, happiness. This part of the military program requires 8 hours.

[1/] Brammell, Op. cit., p.120.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Opinion and practice.-- The writer set out to determine to what extent, if any, elements of the army's basic training program could be combined with the existing secondary-school program. A review of current literature and the writer's personal investigation of the training situation at Fort Knox, Kentucky, indicated the following:

1. Many prominent American educators and a large portion of the American public believe in the advisability of feasibility of offering all or some of the elements of military training through the medium of the existing secondary-school system.[1/]

2. The scheme of combining military training and secondary-school activities has been tried with success by Switzerland, Sweden, and the Union of South Africa to a limited extent, and military training is an important and integral part of the Russian secondary-school

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[1/] Pages 6-15

system.[1]

3. The President's Commission reported that some military courses such as first aid, map reading, and physical training might well be part of the secondary-school curriculum.[2]

4. The United States Army has successfully integrated secondary school and military training at the Experimental Unit established at Fort Knox, Kentucky.[3]

5. Some public and private secondary schools have integrated military and conventional educational programs.[4]

6. There is no evidence to show that the inclusion of military objectives in the public school programs of Sweden or Switxerland has endangered democratic institutions in those countries. On the contrary, it appears that Swiss and Swedish young men have through this medium, developed an awareness of their patriotic obligations.[5]

Point-for-point comparisons.--The evidence not only indicated that the idea of integrating military

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[1] Pages 22-26.

[2] Pages 20-21.

[3] Pages 37-40

[4] Pages 5 and 60.

[5] Pages 23,24,25.

and secondary-school training was not only an accomplished fact in other countries, but that it was being tried to a limited extent in this country. Accordingly, the next step was to determine the exact points at which the military training objectives could be coordinated with the public secondary school aims in this country.. In Chapter II the elements of army basic training, as applied to the National Guard, were listed in detail, and developed into an hypothetical "composite" program. Chapter III set forth the elements of the existing secondary-school program, as determined from the National Survey of Secondary Education and other data, and the military and high school programs were placed in juxtaposition in Chapter IV. From this comparison the following conclusions were reached:

1. Eight of the subjects listed in the National Guard training program, namely: Chemical Warfare Training, Compass, Signal Communications, Map and Photo Reading, Military Courtesy, Sanitation and First Aid Athletics and Physical Training, and Troop Information Program closely parallel certain subjects offered by the majority of our secondary schools.[1]

2. The eight military subjects listed above represent 46 hours or 24 per cent of the 189 hours re-

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[1] Page 64

quired by the composite National Guard training program.[1]

3. There is such a close parallel between many military and secondary-school objectives, that extra emphasis on the military elements would require little additional time or effort by students or teachers.

Recommendations

Personal opinion.-- It is the author's sincere conviction, based on considerable experience and study in the educational and military training fields, that we would have a more effective youth training program if it embodied the following points:

1. Elements of military training which can be presented in conjunction with the regular school program should be incorporated in the curriculum.

2. Educational items of military value should be presented as part of secondary-school training to develop the student's concept of his dual responsibility as a potential citizen and soldier.

3. Standards of discipline, courtesy, marching, teamwork, hygiene, and physical training should approach military standards when applied to secondary-school training.

4. Administrators, teachers, and parents should be

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[1] Page 63

informed of the justification for combining some elements of military and secondary-school training, in order to promote better citizenship, further army-school liason, save money for the taxpayers, avoid duplication of effort, and make for more effective development of the skills and attitudes which are the common objectives of both systems.

5. A study should be made to determine the relation between military casualties and the training received by the victims. The author, as Graves Registration Officer for the First United States Army in Europe, supervised the burial of more than 30,000 Allied and German dead from the invasion of Normandy to the Battle of the Bulge, and is of the opinion that a large proportion of the deaths involved inadequately trained soldiers. Superior training and attention to details enabled German troops to keep their casualties at a minimum, whie opposing American soldiers often were wounded or killed trying to make courage and spirit take the place of military fundamentals.

Experienced soldiers believe that a man's chance of survivial in warfare increases definitely in proportion to his military knowledge, and if this is true and we become engaged in another war, elements of military training learned in secondary school classrooms should cut down our casualty rate.

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